

# **Hamilton's Inaugural Health Research in the City**

**January 16, 2007**

Hosted by McMaster University, Hamilton Health Sciences (HHS), St. Joseph's Healthcare Hamilton, and the Golden Horseshoe Biosciences Network (GHBN)

With a spend of over \$261 million on research, Hamilton is home to one of the top 5 medical research centres in Canada. Research is a competitive enterprise and as Dr. Bill Evans, President of the Juravinski Cancer Centre, said, "we have successfully administered our research but we have not managed the research agenda...collaboration is core to the future of research."

The purpose of this conference was to highlight existing research programs and to create research networks by providing a forum that promotes collaboration between all the players in research - from fundamental, translational, and clinical research to health services research. This inaugural conference did just that. Not only was Dr. Mark Levine, director of the Clinical Trials Methodology Group, captivated by the presentations but he and about 300 other participants left the conference excited about what is happening with research in the city.

Integration of commerce and industry with city wide research initiatives in cancer and obesity was the focus of the day.

Cancer research has become a nationally funded strategy mainly because of lost tax revenue, around \$250 billion, from people disabled by the disease. The war on cancer began with President Nixon and the National Cancer Act in 1971. Since then, \$200 billion has been spent on research in the United State while Canada's involvement in cancer research has reached \$300 million. In his plenary speech, Dr. Evans cited the work of Dr. John Bailar, a cancer researcher who concluded in the *New England Journal of Medicine* (May 1986), that the war on cancer was being lost. Evans suggested that innovation in cancer research will be found by addressing clinical trial infrastructure. He said, "current trial design allows us to identify which regime is superior...innovative design answers WHY."

According to Dr. Arya Sharma, director of the Centre for Obesity Research & Management, "obesity is the mother of all diseases." It is a heterogeneous, complex disease that is the "result of normal behaviour in an abnormal environment." Because of it's complexity we tend to blame the individual, telling them what they should do, or not, especially regarding diet and physical activity. The driving force behind the obesity epidemic is the imbalance between energy expenditure and food intake. Sharma believes that this is substantially affected by the nature of our societies.

Unfortunately, obesity management is getting nowhere and the burden of related chronic diseases (diabetes and hypertension) is increasing. Sharma says that obesity prevention and treatment are not aligned. He says that losing weight is not a treatment. In fact, medical treatment doesn't start until weight loss has actually occurred. Obesity management is all about *how* to keep the weight off. To Sharma, this is treatment - the meds to keep the weight off. Like other chronic diseases, if treatment stops the disease returns. This is where innovation in obesity research may lie – together with the potential to cure diabetes; just as obesity treatment has had a 90% cure rate in sleep apnea.

Cancer research has evolved into an interdisciplinary approach and this is what is needed with obesity research. In Hamilton, we cover the whole spectrum and it's time to integrate. Sharma is currently involved in the development of a centre which aims to integrate research and become the world leader in bariatric medicine and surgery.

Darlene Homonka (GHBN), Micky Milner (Health Technology Exchange) and Christian Dube (Trillium Medical Technology Association) help take researchers from innovation to invoice. They used case studies to present evidence of the value of collaboration and networking. Milner noted that innovation or skills-based clusters, as we see developing in Hamilton, are more profitable than geographic clusters. Dube said that we are all entrepreneurs in our own field and that “commercialization is learning how work with private industry – learning how to become an entrepreneur. The best opportunities lie in face to face contact – not over the Internet.”

Darlene Homonko emphasized the shift in mindset required to bridge the gap between cultures with different values – from academia to industry, publish to patent, research to development. She said that the currency of commercialization is in creating value; having the data that validates the technology.

One of the objectives of the Canadian Institutes of Health Research (CIHR) is to strengthen Canadian health research by funding teams of talented and experienced researchers conducting high-quality research. Hamilton's Health Research in the City Conference has paved the way for cross-populating research activities across the city.

As Salim Yusuf, Chief Scientific Officer HHS concluded, “today we have discovered new ideas for collaboration.” Collaboration brings new ideas to existing ideas and a more competitive edge to Hamilton's research enterprise.